

## CHAPTER 6: UNAVOIDABLE ADVERSE IMPACTS

During normal operations at the Lawrence Livermore National Laboratory (LLNL), a minimal amount of radioactive material and activation products would be released to the environment. However, any radiation dose received by a member of the public from emissions from LLNL would be too small to distinguish from naturally occurring background radiation. During normal operations, even with a strong as-low-as-reasonably-achievable (ALARA) program, workers would be exposed to an increased risk of cancer as a result of occupational exposure to radiation over an extended period.

In addition, because hazardous and toxic chemicals would be routinely handled at LLNL facilities, worker exposure to these chemicals would be unavoidable. However, no onsite chemical concentrations would exceed the Occupational Exposure Limit guidelines. Analysis has shown that chemical pollutant emissions would be of minimal consequence and would not pose a danger to the public.

LLNL operations would generate a variety of wastes (including radioactive, hazardous, mixed, and sanitary) as an unavoidable result of normal operations. Although LLNL uses pollution prevention and waste avoidance measures, generation of chemical and radioactive wastes would be unavoidable. LLNL would continue to further reduce hazards and potential exposures through the continued success of pollution prevention and waste avoidance measures. Details regarding waste generation impacts are presented in Sections 5.2.13.2, 5.3.13.2, and 5.4.13.2 for each alternative. Appendix B contains expanded information on LLNL operations regarding waste generation.